

A Traffic Impact Analysis of

Lim Property

Located in:

Fauquier County, Virginia

Prepared for:

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EXECUTIVE SUMMARY

Patton Harris Rust & Associates (PHR+A) has prepared this document to present the traffic impacts associated with the proposed Lim Property development to be located along the northwest quadrant of the intersection of Marsh Road (Route 17) and Catlett Road (Route 28), in Fauquier County, Virginia. The proposed development will consist of 16,800 square feet of specialty retail, 13,000 square feet of pharmacy, a 3,900 square foot bank, a 2,880 square foot fast-food restaurant and a 3,200 square foot square foot fast-food restaurant. Build-out is anticipated to occur by the Year 2011 over a single transportation phase. Analyses are provided for existing, 2011 background, 2011 build-out as well as 2017 design year traffic conditions. PHR+A has provided analyses for three (3) scenarios: **Scenario A** assumes access to the site via a right in/right out only site-driveway to be located along the west side of Route 17 and along the north side of Route 28, respectively. **Scenario B** assumes access to the site via a right in/right only site-driveway to be located along the west side of Route 17 as well as via a left in/right in/right out only site-driveway to be located along the north side of Route 28. **Scenario C** assumes access to the site via a right in/right only site-driveway to be located along the west side of Route 17 as well as via a full access site-driveway to be located along the north side of Route 28.

PHR+A conducted weekday AM/PM peak hour and Saturday mid-day peak hour manual turning movement counts at the intersections of Route 17 (Marsh Road)/Route 28 (Catlett Road), Route 17 (Marsh Road)/Old Marsh Road, Route 17 (Marsh Road)/Independence Avenue, Route 17 (Marsh Road)/Bowers Run Drive North, Route 17 (Marsh Road)/Bowers Run Drive South, Route 17 (Marsh Road)/Village Center Drive, Route 28 (Catlett Road)/Oak Shade Road and Route 28 (Catlett Road)/Station Drive. To determine the ADT (Average Daily Traffic) along the study area roadway links, a "k" factor (the ratio of weekday PM peak hour traffic volumes to 24-hour traffic volumes) of 9.6%, and 9.4% was utilized for Route 17 and Route 28, respectively, based upon VDOT 2006 published data. PHR+A then grew the existing traffic volumes along the study area roadways of Route 17 (Marsh Road), Route 28 (Catlett Road), Old Marsh Road and Oak Shade Road by two percent (2%) per year through year 2011. Synchro version 7.0 software was used to analyze all the study area intersections.

Based upon Synchro analysis results, assuming the improvements, all the study area intersections associated with Lim Property development will maintain overall level of service "C" or better during 2011 build-out conditions in all three scenarios. The following describes the proffered improvements as well as the suggested improvements for each of the study area intersections for Scenarios A, B and C, as shown in Figures 10A, 10B and 10C, respectively, during 2011 build-out conditions:

➤ *Proffered Improvements (Scenarios A, B, C):*

- Route 17 (Marsh Road)/Independence Avenue: Signalization.
- Route 17 (Marsh Road)/Route 28 (Catlett Road): An eastbound through lane.
- Route 28 (Catlett Road)/Station Drive: Signalization.

In addition to the aforementioned proffered improvements, the following improvements are suggested in order to maintain acceptable level of service "C" during 2011 build-out conditions.

➤ *Suggested Improvements (Scenarios A, B, C):*

- Route 17 (Marsh Road)/Old Marsh Road: Signalization will be required.
- Route 17 (Marsh Road)/Site-Driveway: A Southbound right-turn lane along Route 17 is suggested.
- Route 17 (Marsh Road)/Route 28 (Catlett Road): A westbound through lane, a northbound left-turn and through lane and a southbound through lane will be required. Additionally, for Scenario A, a westbound left-turn lane will be required.
- Route 28 (Catlett Road)/Village Center Drive: An eastbound 4th leg will be required, which will serve as a driveway for background development of Wexford Village.
- Route 28 (Catlett Road)/Site-Drive #2: This is a new intersection. Signalization will be required for Scenario C.
- Route 28 (Catlett Road)/Oak Shade Road: Signalization will be required.

As described above, all three scenarios will require the same improvements at the existing intersections, except for Scenario A, which will require an additional westbound left-turn lane.

Assuming the aforementioned suggested improvements, all the study area intersection will maintain levels of service "D" or better during 2017 design year conditions for Scenarios A, B and C.

1. Introduction

A. Site Location and Study Area

Patton Harris Rust & Associates (PHR+A) has prepared this document to present the traffic impacts associated with the proposed Lim Property development to be located along the northwest quadrant of the intersection of Marsh Road (Route 17) and Catlett Road (Route 28), in Fauquier County, Virginia. The proposed development will consist of 16,800 square feet of specialty retail, 13,000 square feet of pharmacy, a 3,900 square foot bank, a 2,880 square foot fast-food restaurant and a 3,200 square foot square foot fast-food restaurant. Build-out is anticipated to occur by the Year 2011 over a single transportation phase. Analyses are provided for existing, 2011 background, 2011 build-out as well as 2017 design year traffic conditions. PHR+A has provided analyses for three (3) scenarios: **Scenario A** assumes access to the site via a right in/right out only site-driveway to be located along the west side of Route 17 and along the north side of Route 28, respectively. **Scenario B** assumes access to the site via a right in/right only site-driveway to be located along the west side of Route 17 as well as via a left in/right in/right out only site-driveway to be located along the north side of Route 28. **Scenario C** assumes access to the site via a right in/right only site-driveway to be located along the west side of Route 17 as well as via a full access site-driveway to be located along the north side of Route 28.

B. Existing and Proposed Site Uses

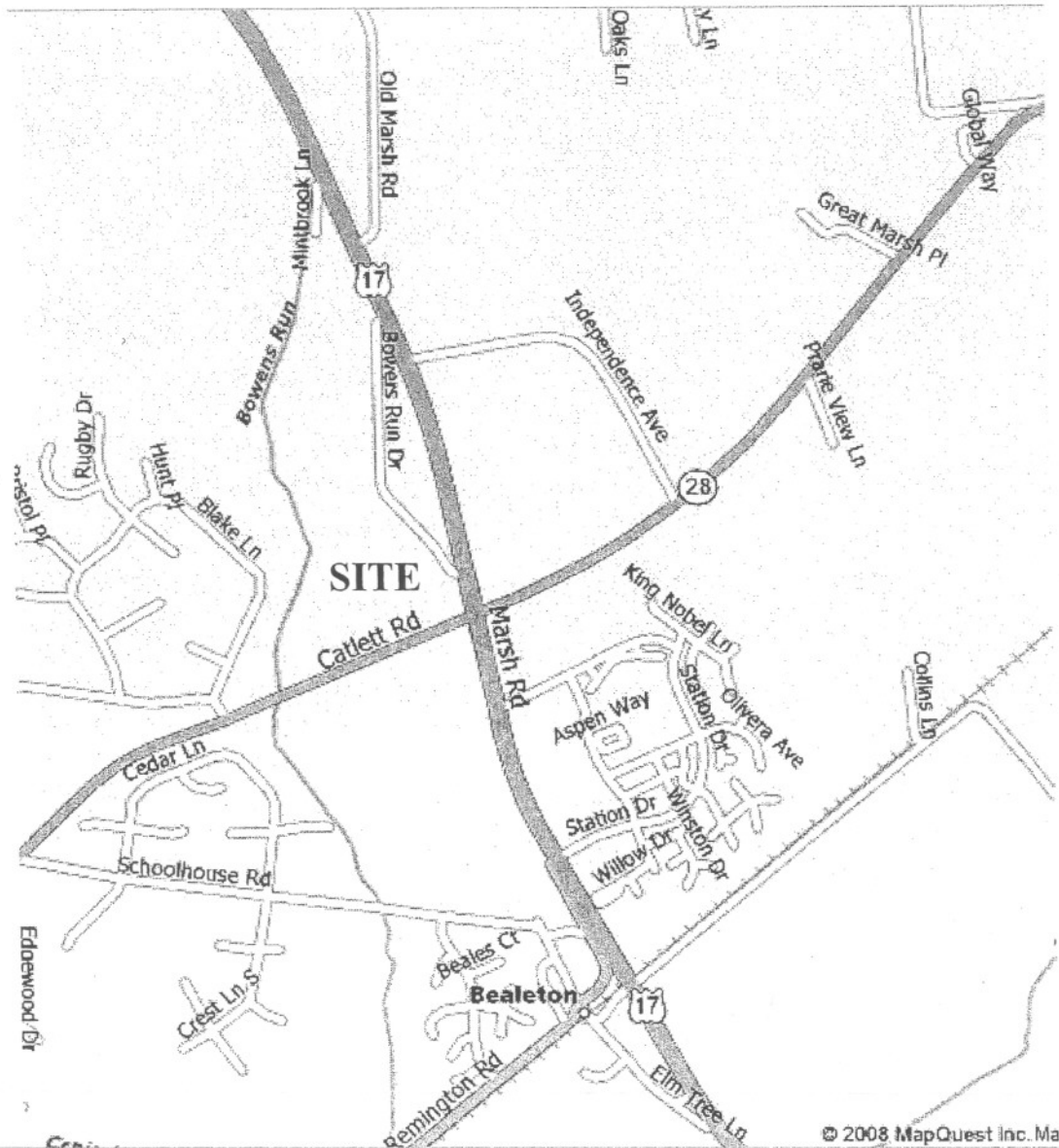
The site is on vacant land. The proposed development will consist of 16,800 square feet of specialty retail, 13,000 square feet of pharmacy, a 3,900 square foot bank, a 2,880 square foot fast-food restaurant and a 3,200 square foot square foot fast-food restaurant. Build-out is anticipated to occur by the Year 2011 over a single transportation phase. **Figure 1** is provided to illustrate the location of Lim Property development with respect to the surrounding roadway network.

C. Existing and Proposed Nearby Uses

The surrounding area is comprised of mixed uses.

D. Existing Roadways and Programmed Improvements

The study area includes Route 17 (Marsh Road) from Old Marsh Road to Village Center Drive and Route 28 (Catlett Road) from Oak Shade Road to Station Drive. The posted speed limit is 45 mph along Route 17 & Route 28, 35 mph along Old Marsh Road and 25 mph along Oak Shade Road in the vicinity of the site.



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Figure 1 Vicinity Map: Lim Property, in Fauquier County, Virginia

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